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October 8, 2009

Verneta Simon
On-Scene Coordinator
U.S. EPA Region V
Emergency Response Branch II, Response Section III
77 West Jackson Blvd Mail Code SE-5J
Chicago, IL 60604

Re: Cavu-Ops, Inc.
Portion of Property along the Wabash River
Former Western Tar Products Site
Terre Haute, Vigo County, Indiana

Dear Ms. Simon:

KERAMIDA Inc. (KERAMIDA) has been retained by Cavu-Ops, Inc. as their environmental contractor in the above referenced matter to address environmental impacts recently discovered along the southern portion of the property adjacent to the Wabash River. The purpose of this letter is to establish a timeline of events regarding the impacts on this portion of the property, and to convey and document the actions that KERAMIDA, by direction of Cavu-Ops, has taken to respond to and mitigate these impacts. The following timeline is KERAMIDA's understanding of the order of events regarding this matter.

Summary and Time Line of Pertinent Actions Regarding Environmental Impacts along the Wabash River Portion of Cavu-Ops, Inc. Property, Terre Haute, IN

- 6/29/09 An anonymous fisherman called the Indiana Department of Environmental Management (IDEM) and reported that black material was seeping from the banks of the Wabash River into the river.
- 7/7/09 U.S. EPA On-Scene Coordinator (OSC) Jeff Crowley and representatives, led by Jason Sewell, of the Indiana Department of Environmental Management (IDEM) responded to the report. Their response consisted of taking a boat out onto the Wabash River in the general vicinity of the reported release and making observations from the river. Neither IDEM nor U.S. EPA requested access to the Site during the investigation. OSC Crowley reported that from his vantage point in a boat on the Wabash River he saw black material seeping from the 20- to 40-foot high river bank that forms the western edge of the Site into the Wabash River. Furthermore, he stated that the black material was located several feet beneath the surface grade of the Site and interspersed intermittently along an

Ms. Verneta Simon
USEPA Region V
Wabash River Portion of
Former Western Tar Property
Terre Haute, IN
Page 2

approximately 400-hundred foot section of the eastern bank of the Wabash River. The black material was also located on the lower banks of the Wabash River and was seen seeping directly into the Wabash River.

- 7/9/09 Joe Card, owner of Cavu-Ops, Inc., was informally made aware of the site visit of the USEPA and the IDEM and the corresponding reported impacts. Mr. Card contacted KERAMIDA to represent Cavu-Ops in this matter as their environmental contractor and to investigate and address these reported impacts.
- 7/9/09 KERAMIDA contacted OSC Crawley and received more detailed information regarding observations made during the site visit. OSC Crawley stated that Verneta Simon was the USEPA Region V on-scene coordinator assigned to this project.
- 7/10/09 KERAMIDA contacted Verneta Simon and discussed a reconnaissance visit by KERAMIDA to the site. Ms. Simon requested that river water and beach soil samples be collected during the site reconnaissance.
- 7/13/09 KERAMIDA mobilized to the site, and accessed the reportedly impacted portion of the property along the Wabash River by boat. The impacts consisted of a tar seep in one location that extended to the river. KERAMIDA immediately removed the portion of the tar seep from contact with the river. Coal tar is a solid under normal atmospheric temperatures and pressures, and only is mobile when temperatures, direct sunlight, and gravity (a steep enough slope), work together to allow it to slowly move downslope. Because of these properties of coal tar material, removing the material from contact from the river by hand and assuring that it would not contact the river until further remedial efforts could be planned, was a simple task. KERAMIDA also collected river water samples from the river adjacent to the impacted area and both up and downstream from that area. A soil sample was also taken from sand that was beneath the tar seep impacts.

The northern and southern extent of observed impacts have the following coordinates: Northern Extent - 39° 25' 58.81" N 87° 25' 47.56 W
Southern Extent - 39° 25' 55.34" N 87° 25' 48.94 W

Lab Results for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), and Polychlorinated Biphenols (PCBs) were summarized and submitted to Verneta Simon in July 2009 and did not indicate any compounds present above applicable IDEM cleanup guidelines. The summary table and lab results are attached to this document.

Ms. Verneta Simon
USEPA Region V
Wabash River Portion of
Former Western Tar Property
Terre Haute, IN
Page 3

- 7/22/09 The Workplan to Mitigate Coal Tar Impacts along the Wabash River and the associated Health and Safety Plan was submitted to Verneta Simon. KERAMIDA scheduled to mobilize to site on August 3, 2009. Verneta Simon suggested a later date to allow for some necessary administrative functions to occur. August 10, 2009 was agreed upon for a mobilization date.
- 7/27-30/09 KERAMIDA made calls to the Army Corps of Engineers in Indianapolis. The Corps confirmed that unless we were working in or above the normal river channel that they did not have jurisdiction and did not require any permits. They stated that IDNR had the jurisdiction of the beach area.
- KERAMIDA made calls to IDNR requesting information regarding required permits. It was stated that hand removal of material would not require a permit but that IDNR would need to be informed of the activity. Also, any activity requiring heavy equipment or actual excavation would require a permit.
- 8/10/09 KERAMIDA informed IDNR of plans to remove coal tar impacts by hand and with use of hand tools.
- 8/10/09 KERAMIDA mobilized to site to remove coal tar impacts that were able to be removed by hand and with hand tools. The material was walked or carted to the “lift area” where it was lifted in 55 gallon drums from the river level to the plant level, at the top of the river bank, with the use of a small crane.
- 8/10-20/09 KERAMIDA removed material from along the river to a staging area on the plant level. Photo documentation of the removal activities are attached.
- 9/25/09 A letter from IDNR was received by KERAMIDA that stated a permit was not necessary to remove material by hand or with hand tools. Furthermore, it was stated that excavation of material with the use of heavy equipment would require a IDNR permit. A copy of the letter is attached.
- Current The appropriate IDNR permit is being completed in order to allow excavation of the coal tar material that remains on site.
- The Agreed Order is in final negotiations between EPA and Cavu-Ops. When the Order is executed, further mitigation of coal tar impacts on the river bank will commence.

Ms. Verneta Simon
USEPA Region V
Wabash River Portion of
Former Western Tar Property
Terre Haute, IN
Page 4

It has been a pleasure working with you to most efficiently address these issues. If you have questions or need additional information please do not hesitate to call me at (317) 685-8230 or (317) 697-4815 or contact Andy Gremos at (317) 685-6600.

Sincerely,
KERAMIDA Inc.



Scott Randall, L.P.G., C.H.M.M.
Senior Project Manager



Andrew Gremos, L.P.G., C.H.M.M.
Senior Vice President

Photographic Documentation

Wabash River Beach Impacts and Clean Up-Site

Photoarans

Cavu-Ops Riverside Property-Terre Haute, IN

Removal Actions

Description

1. Keramida Workers picking coal tar material up by hand and loading onto wagons for transport to lift area. (Week of August 10, 2009)



Description

2. Keramida workers loading coal tar materials on wagon (left) and moving wagon to lifting area (right) - Week of August 10, 2009.



Wabash River Beach Impacts and Clean Up-Site

Photographs

Cavu-Ops Riverside Property-Terre Haute, IN

Removal Actions	

Description

3. Photographs showing the method of lifting coal tar material from the beach level to the Plant Level (top of River Bank). Material was placed in 55-gallon drums and lifted with a small crane.

Occasionally large pieces were rigged directly (far right). Week of August 10, 2009.



Description

4. Photographs showing the small crane being utilized to move the material and a transport drum in mid lift. (Week of August 10, 2009)



Wabash River Beach Impacts and Clean Up-Site

Photoaraphs

Cavu-Ops Riverside Property-Terre Haute, IN

Removal Actions

Description

5. Crane in action and the coal tar material stockpile starting to accumulate. (8/13/09)



6. Typical load of coal tar material on wagon used to move material to lift area (left), material being removed from beach with a pick axe (bottom right), and other material being carried by hand (top right) (8/13/09).



Wabash River Beach Impacts and Clean Up-Site Photographs

Before and After Photos of impacted areas.	Cavu-Ops Riverside Property-Terre Haute, IN

Description	
<p>1. Photo of tar seep on July 13, 2009-Keramida's first visit to impacted beach(left) and after the beach cleanup on August 20, 2009(right).</p>	 

Description	
<p>2. Photo of tar seep contacting the Wabash River on July 13, 2009-Keramida's first visit to impacted beach(left) and after the beach cleanup on August 20, 2009(right).</p>	 

Wabash River Beach Impacts and Clean Up-Site Photographs

Before and After Photos of impacted areas.	Cavu-Ops Riverside Property-Terre Haute, IN
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Description	 <p>3. Photo of old wooden barrels filled with coal tar (high on bank) upper left and some removal activities of the barrels (lower right).</p> 
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Description	 <p>4. Photo of hard coal tar material that is falling out of bank and adding to the below shown debris field in plate 5.</p> <p>5. The impacts in the river bank wall will require excavation after IDNR permit approval is received.</p> 
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Wabash River Beach Impacts and Clean Up-Site Photographs

Before and After Photos of impacted areas.	Cavu-Ops Riverside Property-Terre Haute, IN	
<p>Description</p> <p>5. Photo of coal tar debris field fed by material shown in plate 4 on 8/11/09 (left) and same area after clean up on August 20, 2009(right).</p>	 	
<p>Description</p> <p>6. Photo of typical coal tar debris found along beach.</p>		

IDNR Approval for Work Letter

MAILED SEP 25 2009



Indiana Department of Natural Resources

Mitchell E. Daniels, Jr., Governor
Robert E. Carter JR, Director
Division of Water
402 West Washington Street
Room W264
Indianapolis, IN 46204-2641
Phone (317) 232-4160
Toll-free (877) 928-3755
Fax (317) 233-4579
www.in.gov/dnr/water/

Scott Randell, LPG, CHMM
Keramida Environmental Inc
401 North College Av
Indianapolis, IN 46202-3605

September 24, 2009
RECEIVED
Basin 16

SEP 28 2009
KERAMIDA

Re: CTS-2694
Wabash River, Vigo County

Dear Mr. Randell:

This is in response to a request received on August 10, 2009 for a Department review of a proposed project to remove coal tar deposits on the surface of the east bank of the Wabash River. The material will be removed using handheld tools. Based on your description, the project lies in the W½, NE¼, NE¼ of Section 5, Township 11N, Range 9W, and is located along the east bank of the river approximately 1800' east and 1800' south of the intersection of I-70 and State Road 63 extending upstream 400' near Terre Haute, Honey Creek Township, Vigo County.

The Department staff has determined that approval of the Department of Natural Resources is not required if the material is removed using only hand-held tools. No heavy equipment should be utilized in the removal of materials from the floodway without a permit from the Department of Natural Resources.

The conditions listed below must be met:

- 1) equipment used for the proposed project must only consist of portable machinery and hand tools
- 2) remove all construction debris from the floodway upon completion of the project
- 3) there must be no disturbance of existing land grades, stream bottom, or banks
- 4) obtain prior written approval from the Department for any additional construction, excavation or filling in or on the floodway beyond the scope of this project

This letter should be displayed at the project site. The Division of Water will place a copy of this letter in the file to be retained as a permanent record.

You should not construe this letter as a local building permit, nor is it a waiver of the provisions of any local building or zoning ordinances. Additionally, this letter does not relieve you of the responsibility of obtaining permits, approvals, easements, etc. as required by other federal, state and local agencies.

Thank you for this opportunity to be of assistance; your interest in providing safe floodplain development is appreciated. If you have any questions regarding this letter, please contact me, at 317-234-1073 or (toll free) 877-928-3755.

Sincerely,



Becky S. Davis, CFM
Sr Environmental Manager
Division of Water

pc: Richard Harris – IDEM VRP Section Chief
Corey Webb – IDEM Office of Land Quality
Bill Hayes – IDEM Office of Land Quality RISC
Kristy McIntire – IDEM Office of Land Quality Chemistry

Summary of Analytical Results

Table 1
River Water Analytical Results (ug/L)
Adjacent to the
Former Western Tar Facility
Terre Haute, Indiana

Sample No.	Date Sampled	Acenaphthene	Benzene	Benzo (a) pyrene	Chlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	Ethylbenzene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Polychlorinated Biphenyls (PCBs)
Upstream #1	7/13/2009	<1.0	<5	<0.1	<5	<5	<5	<5	<5	<5	<1.0	<1.0	<1.0	<1.0	<0.50
Upstream #2	7/13/2009	1.13	<5	<0.1	<5	<5	<5	<5	<5	<5	<1.0	<1.0	<1.0	<1.0	<0.50
Downstream	7/13/2009	<1.0	<5	<0.1	<5	<5	<5	<5	<5	<5	<1.0	<1.0	<1.0	<1.0	<0.50
USEPA Superfund Ecotox Threshholds -Surface Water ¹ (ug/L)		23	46	0.014	130	14	38	9.4	47	290.0	8.1	3.9	24	6.3	0.19
IDEM RISC Residential Groundwater (ug/L)		460	5.0	0.12	130	600	80	75	990	1,600	1500	310	8.3	23	0.50

Notes:

Samples analyzed using EPA SW-846 Method 8260, 8270, and 8082.

NA = Not available or applicable

ug/L = micrograms per liter

(1) USEPA Office of Solid Waste and Emergency Response, Eco Update, January 1996

(2) IDEM RISC, February 10, 2001 with updates through May 1, 2009.

Table 2
Soil / Material Analytical Results (mg/Kg)
Adjacent to the
Former Western Tar Facility
Terre Haute, Indiana

Sample No.	Date Sampled	Acenaphthene	Benzene	Benzo (a) Pyrene	Chlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1-Dichloroethane	Ethylbenzene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Polychlorinated Biphenyls (PCBs)
Dark Soil - South of Tar Flow	7/13/2009	<0.37	<0.006	<0.37	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.37	<0.37	<0.37	<0.34	<0.08
Soil Directly Under Tar Flow	7/13/2009	<0.35	<0.005	<0.35	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	12.7	0.72	<0.35	5.41	<0.08
IDEML RISC ¹ Residential Clean up Goals		130	0.034	0.5	13	17	2.3	2.2	5.6	13	2,000	170	0.7	13	1.8

Notes:

Samples analyzed using EPA SW-846 Method 8260, 8270, and 8082

NA = Not available or applicable

mg/kg = milligrams per kilogram

(I) IDEM RISC, February 10, 2001 with updates through May 1, 2009.

Laboratory Results



ENVision Laboratories, Inc.
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Indianapolis, IN 46239
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RECEIVED

Mr. Scott Randall
Keramida Environmental , Inc.
401 North College Avenue
Indianapolis, IN 46202

JUL 29 2009

KERAMIDA

July 27, 2009

ENVision Project Number: 2009-1424
Client Project Name: 3268B / Cavu-Ops Wabash

Dear Mr. Randall,

Please find the attached analytical report for the samples received July 15, 2009. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data. TCLP analyses is not included in NELAC certification.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. ENVision Laboratories looks forward to working with you on your next project.

Yours Sincerely,

Cheryl A. Crum

Director of Project Management
ENVision Laboratories, Inc.

IL ELAP / NELAC Accreditation # 100454





ENVision Laboratories, Inc.
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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8260

Prep Method: 5030B

Analytical Batch: 071809vw

UPSTREAM #1 FAIRBANKS

Client Sample ID:	PAVE	Sample Collection Date/Time:	7/13/09 11:45
Envision Sample Number:	9-10000	Sample Received Date/Time:	7/15/09 16:28
Sample Matrix:	water		

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 100	100	
Acrylonitrile	< 100	100	
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 5	5	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 5	5	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 100	100	
Dichlorodifluoromethane	< 5	5	



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Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
cis-1,3-Dichloropropene	< 5	5	
trans-1,3-Dichloropropene	< 5	5	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 5	5	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
Naphthalene	< 5	5	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 5	5	
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 5	5	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	96%		
1,2-Dichloroethane-d4 (surrogate)	83%		
Toluene-d8 (surrogate)	99%		
4-bromofluorobenzene (surrogate)	92%		

Analysis Date/Time: 07-18-09/04:16

Analyst Initials tjt

Page 3 of 49



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8270 BNA/PAH-SIM

Prep Method: 3520C

BNA Analytical Batch: 072009B

Client Sample ID: UPSTREAM #1 FAIRBANKS PAVE **Sample Collection Date/Time:** 7/13/09 11:45

Envision Sample Number: 9-10000 **Sample Received Date/Time:** 7/15/09 16:28

Sample Matrix: water

<u>BNA Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Aniline	< 10	10	
Benzoic Acid	< 50	50	
Benzyl Alcohol	< 20	20	
4-Bromophenylphenyl ether	< 10	10	
Butylbenzylphthalate	< 10	10	
Carbazole	< 20	20	
4-Chloro-3-methylphenol	< 20	20	
4-Chloroaniline	< 20	20	
bis(2-Chloroethoxy)methane	< 10	10	
bis(2-Chloroethyl)ether	< 10	10	
bis(2-Chloroisopropyl)ether	< 10	10	
2-Chloronaphthalene	< 10	10	
2-Chlorophenol	< 10	10	
4-Chlorophenylphenyl ether	< 10	10	
Dibenzofuran	< 10	10	
1,2-Dichlorobenzene	< 10	10	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 10	10	
3,3-Dichlorobenzidine	< 20	20	
2,4-Dichlorophenol	< 10	10	
Diethylphthalate	< 10	10	
2,4-Dimethylphenol	< 10	10	
Dimethylphthalate	< 10	10	
Di-n-butylphthalate	< 10	10	
4,6-Dinitro-2-methylphenol	< 50	50	
2,4-Dinitrophenol	< 50	50	
2,4-Dinitrotoluene	< 10	10	
2,6-Dinitrotoluene	< 10	10	
Di-n-octylphthalate	< 10	10	
bis(2-Ethylhexyl)phthalate	< 5	5	
Hexachloro-1,3-butadiene	< 10	10	
Hexachlorobenzene	< 5	5	
Hexachlorocyclopentadiene	< 25	25	
Hexachloroethane	< 10	10	



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Analytical Report

8270 Continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Isophorone	< 10	10	
2-Methylphenol (o-Cresol)	< 10	10	
3&4-Methylphenol	< 20	20	
2-Nitroaniline	< 50	50	
3-Nitroaniline	< 50	50	
4-Nitroaniline	< 50	50	
Nitrobenzene	< 10	10	
2-Nitrophenol,	< 10	10	
4-Nitrophenol	< 50	50	
N-Nitroso-di-n-propylamine	< 10	10	
N-Nitrosodiphenylamine	< 10	10	
Pentachlorophenol	< 50	50	
Phenol	< 10	10	
1,2,4-Trichlorobenzene	< 10	10	
2,4,5-Trichlorophenol	< 10	10	
2,4,6-Trichlorophenol	< 10	10	
2-Fluorophenol (surrogate)	76%		
Phenol-d6 (surrogate)	86%		
Nitrobenzene-d5 (surrogate)	95%		
2-Fluorobiphenyl (surrogate)	66%		
2,4,6-Tribromophenol (surrogate)	41%		
p-Terphenyl-d14 (surrogate)	27%		
Analysis Date/Time:	07-20-09/12:34		
Analyst Initials:	gjd		
Date Extracted:	7/16/2009		
Initial Sample Volume:	1000 mL		
Final Volume:	1.0 mL		

PAH-SIM Analytical Batch: 072009P

<u>PAH-SIM Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acenaphthene	< 1.0	1.0	
Acenaphthylene	< 1.0	1.0	
Anthracene	< 0.10	0.10	
Benzo(a)anthracene	< 0.10	0.10	
Benzo(a)pyrene	< 0.10	0.10	
Benzo(b)fluoranthene	< 0.10	0.10	
Benzo(g,h,i)perylene	< 0.10	0.10	
Benzo(k)fluoranthene	< 0.10	0.10	
Chrysene	< 0.10	0.10	
Dibenzo(a,h)anthracene	< 0.10	0.10	
Fluoranthene	< 1.0	1.0	
Fluorene	< 1.0	1.0	
Indeno(1,2,3-cd)pyrene	< 0.022	0.022	
2-methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
Phenanthrene	< 1.0	1.0	
Pyrene	< 1.0	1.0	
Analysis Date/Time:	07-20-09/09:57		
Analyst Initials	gjd		



ENVision Laboratories, Inc.
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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8260

Prep Method: 5030B

Analytical Batch: 071809VW

UPSTREAM #2 NEAR

IMPACTS

Sample Collection Date/Time: 7/13/09

Client Sample ID: 9-10001

Sample Received Date/Time: 7/15/09 16:28

Envision Sample Number: water

Sample Matrix:

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 100	100	
Acrylonitrile	< 100	100	
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 5	5	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 5	5	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 100	100	
Dichlorodifluoromethane	< 5	5	



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Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
cis-1,3-Dichloropropene	< 5	5	
trans-1,3-Dichloropropene	< 5	5	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 5	5	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
Naphthalene	< 5	5	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 5	5	
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 5	5	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	98%		
1,2-Dichloroethane-d4 (surrogate)	84%		
Toluene-d8 (surrogate)	103%		
4-bromofluorobenzene (surrogate)	99%		
Analysis Date/Time:	07-18-09/02:44		
Analyst Initials	tjg		



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8270 BNA/PAH-SIM

Prep Method: 3520C

BNA Analytical Batch: 072009B

Client Sample ID: UPSTREAM #2 NEAR IMPACTS

Envision Sample Number: 9-10001

Sample Matrix: water

Sample Collection Date/Time: 7/13/09

Sample Received Date/Time: 7/15/09 16:28

<u>BNA Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Aniline	< 10	10	
Benzoic Acid	< 50	50	
Benzyl Alcohol	< 20	20	
4-Bromophenylphenyl ether	< 10	10	
Butylbenzylphthalate	< 10	10	
Carbazole	< 20	20	
4-Chloro-3-methylphenol	< 20	20	
4-Chloroaniline	< 20	20	
bis(2-Chloroethoxy)methane	< 10	10	
bis(2-Chloroethyl)ether	< 10	10	
bis(2-Chloroisopropyl)ether	< 10	10	
2-Chloronaphthalene	< 10	10	
2-Chlorophenol	< 10	10	
4-Chlorophenylphenyl ether	< 10	10	
Dibenzofuran	< 10	10	
1,2-Dichlorobenzene	< 10	10	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 10	10	
3,3-Dichlorobenzidine	< 20	20	
2,4-Dichlorophenol	< 10	10	
Diethylphthalate	< 10	10	
2,4-Dimethylphenol	< 10	10	
Dimethylphthalate	< 10	10	
Di-n-butylphthalate	< 10	10	
4,6-Dinitro-2-methylphenol	< 50	50	
2,4-Dinitrophenol	< 50	50	
2,4-Dinitrotoluene	< 10	10	
2,6-Dinitrotoluene	< 10	10	
Di-n-octylphthalate	< 10	10	
bis(2-Ethylhexyl)phthalate	< 5	5	
Hexachloro-1,3-butadiene	< 10	10	
Hexachlorobenzene	< 5	5	
Hexachlorocyclopentadiene	< 25	25	
Hexachloroethane	< 10	10	



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Analytical Report

8270 Continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Isophorone	< 10	10	
2-Methylphenol (o-Cresol)	< 10	10	
3&4-Methylphenol	< 20	20	
2-Nitroaniline	< 50	50	
3-Nitroaniline	< 50	50	
4-Nitroaniline	< 50	50	
Nitrobenzene	< 10	10	
2-Nitrophenol ,	< 10	10	
4-Nitrophenol	< 50	50	
N-Nitroso-di-n-propylamine	< 10	10	
N-Nitrosodiphenylamine	< 10	10	
Pentachlorophenol	< 50	50	
Phenol	< 10	10	
1,2,4-Trichlorobenzene	< 10	10	
2,4,5-Trichlorophenol	< 10	10	
2,4,6-Trichlorophenol	< 10	10	
2-Fluorophenol (surrogate)	73%		
Phenol-d6 (surrogate)	82%		
Nitrobenzene-d5 (surrogate)	97%		
2-Fluorobiphenyl (surrogate)	64%		
2,4,6-Tribromophenol (surrogate)	37%		
p-Terphenyl-d14 (surrogate)	34%		
Analysis Date/Time:	07-20-09/13:05		
Analyst Initials:	gjd		
Date Extracted:	7/16/2009		
Initial Sample Volume:	1000 mL		
Final Volume:	1.0 mL		

PAH-SIM Analytical Batch: 072009P

<u>PAH-SIM Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acenaphthene	1.13	1.0	
Acenaphthylene	< 1.0	1.0	
Anthracene	< 0.10	0.10	
Benzo(a)anthracene	< 0.10	0.10	
Benzo(a)pyrene	< 0.10	0.10	
Benzo(b)fluoranthene	< 0.10	0.10	
Benzo(g,h,i)perylene	< 0.10	0.10	
Benzo(k)fluoranthene	< 0.10	0.10	
Chrysene	< 0.10	0.10	
Dibenzo(a,h)anthracene	< 0.10	0.10	
Fluoranthene	< 1.0	1.0	
Fluorene	< 1.0	1.0	
Indeno(1,2,3-cd)pyrene	< 0.022	0.022	
2-methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
Phenanthrene	< 1.0	1.0	
Pyrene	1.06	1.0	
Analysis Date/Time:	07-20-09/10:55		
Analyst Initials	gjd		



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL
Project ID: CAVU-OPS WABASH
Client Project Manager: SCOTT RANDALL
ENVision Project Number: 2009-1424
Analytical Method: 8260
Prep Method: 5030B
Analytical Batch: 071809VW

Client Sample ID: DOWNSTREAM **Sample Collection Date/Time:** 7/13/09
Envision Sample Number: 9-10002 **Sample Received Date/Time:** 7/15/09 16:28
Sample Matrix: water

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acetone	< 100	100	
Acrolein	< 100	100	
Acrylonitrile	< 100	100	
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromoform	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 5	5	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 5	5	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 100	100	
Dichlorodifluoromethane	< 5	5	



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Analytical Report

8260 continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
cis-1,3-Dichloropropene	< 5	5	
trans-1,3-Dichloropropene	< 5	5	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	
Hexachloro-1,3-butadiene	< 5	5	
n-Hexane	< 10	10	
2-Hexanone	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
Naphthalene	< 5	5	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 5	5	
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 5	5	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene (Total)	< 10	10	
Dibromofluoromethane (surrogate)	111%		
1,2-Dichloroethane-d4 (surrogate)	89%		
Toluene-d8 (surrogate)	114%		
4-bromofluorobenzene (surrogate)	95%		
Analysis Date/Time:	07-18-09/03:07		
Analyst Initials	tjg		



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8270 BNA/PAH-SIM

Prep Method: 3520C

BNA Analytical Batch: 072009B

Client Sample ID: DOWNSTREAM

Envision Sample Number: 9-10002

Sample Matrix: water

Sample Collection Date/Time: 7/13/09

Sample Received Date/Time: 7/15/09 16:28

<u>BNA Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Aniline	< 10	10	
Benzoic Acid	< 50	50	
Benzyl Alcohol	< 20	20	
4-Bromophenylphenyl ether	< 10	10	
Butylbenzylphthalate	< 10	10	
Carbazole	< 20	20	
4-Chloro-3-methylphenol	< 20	20	
4-Chloroaniline	< 20	20	
bis(2-Chloroethoxy)methane	< 10	10	
bis(2-Chloroethyl)ether	< 10	10	
bis(2-Chloroisopropyl)ether	< 10	10	
2-Chloronaphthalene	< 10	10	
2-Chlorophenol	< 10	10	
4-Chlorophenylphenyl ether	< 10	10	
Dibenzofuran	< 10	10	
1,2-Dichlorobenzene	< 10	10	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 10	10	
3,3-Dichlorobenzidine	< 20	20	
2,4-Dichlorophenol	< 10	10	
Diethylphthalate	< 10	10	
2,4-Dimethylphenol	< 10	10	
Dimethylphthalate	< 10	10	
Di-n-butylphthalate	< 10	10	
4,6-Dinitro-2-methylphenol	< 50	50	
2,4-Dinitrophenol	< 50	50	
2,4-Dinitrotoluene	< 10	10	
2,6-Dinitrotoluene	< 10	10	
Di-n-octylphthalate	< 10	10	
bis(2-Ethylhexyl)phthalate	< 5	5	
Hexachloro-1,3-butadiene	< 10	10	
Hexachlorobenzene	< 5	5	
Hexachlorocyclopentadiene	< 25	25	
Hexachloroethane	< 10	10	



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Analytical Report

8270 Continued...

<u>Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Isophorone	< 10	10	
2-Methylphenol (o-Cresol)	< 10	10	
3&4-Methylphenol	< 20	20	
2-Nitroaniline	< 50	50	
3-Nitroaniline	< 50	50	
4-Nitroaniline	< 50	50	
Nitrobenzene	< 10	10	
2-Nitrophenol	< 10	10	
4-Nitrophenol	< 50	50	
N-Nitroso-di-n-propylamine	< 10	10	
N-Nitrosodiphenylamine	< 10	10	
Pentachlorophenol	< 50	50	
Phenol	< 10	10	
1,2,4-Trichlorobenzene	< 10	10	
2,4,5-Trichlorophenol	< 10	10	
2,4,6-Trichlorophenol	< 10	10	
2-Fluorophenol (surrogate)	82%		
Phenol-d6 (surrogate)	74%		
Nitrobenzene-d5 (surrogate)	105%		
2-Fluorobiphenyl (surrogate)	84%		
2,4,6-Tribromophenol (surrogate)	33%		
p-Terphenyl-d14 (surrogate)	51%		
Analysis Date/Time:	07-20-09/13:35		
Analyst Initials:	gjd		
Date Extracted:	7/16/2009		
Initial Sample Volume:	1000 mL		
Final Volume:	1.0 mL		

PAH-SIM Analytical Batch: 072009P

<u>PAH-SIM Compounds</u>	<u>Sample Results (ug/L)</u>	<u>Reporting Limit (ug/L)</u>	<u>Flags</u>
Acenaphthene	< 1.0	1.0	
Acenaphthylene	< 1.0	1.0	
Anthracene	< 0.10	0.10	
Benzo(a)anthracene	< 0.10	0.10	
Benzo(a)pyrene	< 0.10	0.10	
Benzo(b)fluoranthene	< 0.10	0.10	
Benzo(g,h,i)perylene	< 0.10	0.10	
Benzo(k)fluoranthene	< 0.10	0.10	
Chrysene	< 0.10	0.10	
Dibenzo(a,h)anthracene	< 0.10	0.10	
Fluoranthene	< 1.0	1.0	
Fluorene	< 1.0	1.0	
Indeno(1,2,3-cd)pyrene	< 0.022	0.022	
2-methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
Phenanthrene	< 1.0	1.0	
Pyrene	< 1.0	1.0	
Analysis Date/Time:	07-20-09/11:23		
Analyst Initials	gjd		



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: TCLP Metals 6010B/7471A

Prep Method: 1311

Client Sample ID:	TAR/SOIL MIX	Sample Collection Date/Time:	7/13/09	12:45
Envision Sample Number:	9-10003	Sample Received Date/Time:	7/15/09	16:28
Sample Matrix:	soil			

<u>Compounds</u>	<u>Sample Results (mg/l)</u>	<u>Reporting Limit (mg/l)</u>	<u>Flags</u>
Arsenic	< 0.01	0.01	
Barium	< 0.1	0.1	
Cadmium	< 0.005	0.005	
Chromium	< 0.01	0.01	
Lead	< 0.01	0.01	
Mercury	< 0.002	0.002	
Selenium	< 0.01	0.01	
Silver	< 0.05	0.05	

Analysis Date/Time:	07-24-09/08:59	Hg Analysis Date/Time:	07-22-09/12:47
Analyst Initials:	gjd	Hg Analyst Initials:	gjd
Date Digested:	7/22/2009	Date Digested:	7/21/2009
Initial Sample Volume:	50 ml	Initial Sample Volume:	50 ml
Final Volume:	50 ml	Final Volume:	50 ml
Analytical Batch:	072409icp	Analytical Batch:	072209hgw

Results reported on wet weight basis.



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: TCLP VOC Method 5035A/8260B

Prep Method: 1311

Analytical Batch: 072209TCLP

Client Sample ID: TAR/SOIL MIX

Envision Sample Number: 9-10003

Sample Matrix: soil

Sample Collection Date/Time: 7/13/09

12:45

Sample Received Date/Time: 7/15/09

16:28

Compounds	Sample Results (mg/l)	Reporting Limit (mg/l)	Flags
Benzene	< 0.050	0.05	
Methyl ethyl ketone (MEK)	< 0.100	0.1	
Carbon Tetrachloride	< 0.050	0.05	
Chlorobenzene	< 0.050	0.05	
Chloroform	< 0.050	0.05	
1,2-Dichloroethane	< 0.050	0.05	
1,1-Dichloroethene	< 0.050	0.05	
Tetrachloroethene	< 0.050	0.05	
Trichloroethene	< 0.050	0.05	
Vinyl Chloride	< 0.100	0.1	
Dibromofluoromethane (surrogate)	51.9	104%	
1,2-Dichloroethane-d4 (surrogate)	43.2	86%	
Toluene-d8 (surrogate)	52.1	104%	
4-bromofluorobenzene (surrogate)	49.1	98%	
Analysis Date/Time:	07/22/09/09:56		
Analyst Initials	tjg		



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: TCLP BNA Compounds Method 3510C/8270C

Prep Method: 1311

Analytical Batch: 072409B

Client Sample ID:	TAR/SOIL MIX	Sample Collection Date/Time:	7/13/09	12:45
Envision Sample Number:	9-10003	Sample Received Date/Time:	7/15/09	16:28
Sample Matrix:	soil			

Compounds	Sample Results (mg/L)	Reporting Limit (mg/L)	Flags
1,4-Dichlorobenzene	< 0.1	0.1	
2,4-Dinitrotoluene	< 0.1	0.1	
Hexachlorobenzene	< 0.1	0.1	
Hexachlorobutadiene	< 0.1	0.1	
Hexachloroethane	< 0.1	0.1	
o-Cresol	< 0.1	0.1	
m&P-Cresol	< 0.1	0.1	
Nitrobenzene	< 0.1	0.1	
Pentachlorophenol	< 0.5	0.5	
Pyridine	< 0.5	0.5	
2,4,5-Trichlorophenol	< 0.1	0.1	
2,4,6-Trichlorophenol	< 0.1	0.1	
2-Fluorophenol (surrogate)	95%		
Phenol-d6 (surrogate)	109%		
Nitrobenzene-d5 (surrogate)	101%		
2-Fluorobiphenyl (surrogate)	95%		
2,4,6-Tribromophenol (surrogate)	55%		
p-Terphenyl-d14 (surrogate)	50%		
Analysis Date/Time:	07-24-09/09:40		
Analyst Initials:	gjd		
Date Extracted:	7/22/2009		
Initial Sample Volume:	200 mL		
Final Volume:	1.0 mL		



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8260

Prep Method: 5035A

Analytical Batch: 071909VS

DARK SOIL-SOUTH OF TAR

Client Sample ID:	FLOW	Sample Collection Date/Time:	7/13/09
Envision Sample Number:	9-10004	Sample Received Date/Time:	7/15/09 16:28
Sample Matrix:	soil		

Compounds	Sample Results (ug/kg)	Rep. Limit (ug/kg)	Flags
Acetone	< 112	112	
Acrolein	< 112	112	
Acrylonitrile	< 112	112	
Benzene	< 6	6	
Bromobenzene	< 6	6	
Bromochloromethane	< 6	6	
Bromodichloromethane	< 6	6	
Bromoform	< 6	6	
Bromomethane	< 6	6	
n-Butanol	< 56	56	
2-Butanone (MEK)	< 11	11	
n-Butylbenzene	< 6	6	
sec-Butylbenzene	< 6	6	
tert-Butylbenzene	< 6	6	
Carbon Disulfide	< 6	6	
Carbon Tetrachloride	< 6	6	
Chlorobenzene	< 6	6	
Chloroethane	< 6	6	
2-Chloroethylvinylether	< 56	56	
Chloroform	< 6	6	
Chloromethane	< 6	6	
2-Chlorotoluene	< 6	6	
4-Chlorotoluene	< 6	6	
1,2-Dibromo-3-chloropropane	< 6	6	
Dibromochloromethane	< 6	6	
1,2-Dibromoethane (EDB)	< 6	6	
Dibromomethane	< 6	6	
1,2-Dichlorobenzene	< 6	6	
1,3-Dichlorobenzene	< 6	6	
1,4-Dichlorobenzene	< 6	6	
trans-1,4-Dichloro-2-butene	< 112	112	
Dichlorodifluoromethane	< 6	6	
1,1-Dichloroethane	< 6	6	
1,2-Dichloroethane	< 6	6	
1,1-Dichloroethene	< 6	6	



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Analytical Report

8260 continued...

Compounds	Sample Results (ug/kg)	Rep. Limit (ug/kg)	Flags
cis-1,2-Dichloroethene	< 6	6	
trans-1,2-Dichloroethene	< 6	6	
1,2-Dichloropropane	< 6	6	
1,3-Dichloropropane	< 6	6	
2,2-Dichloropropane	< 6	6	
1,1-Dichloropropene	< 6	6	
cis-1,3-Dichloropropene	< 6	6	
trans-1,3-Dichloropropene	< 6	6	
Ethylbenzene	< 6	6	
Ethyl methacrylate	< 112	112	
Hexachloro-1,3-butadiene	< 6	6	
n-Hexane	< 11	11	
2-Hexanone	< 11	11	
Iodomethane	< 11	11	
Isopropylbenzene (Cumene)	< 6	6	
p-Isopropyltoluene	< 6	6	
Methylene chloride	< 22	22	
4-Methyl-2-pentanone (MIBK)	< 11	11	
Methyl-tert-butyl-ether	< 6	6	
Naphthalene	< 6	6	
n-Propylbenzene	< 6	6	
Styrene	< 6	6	
1,1,1,2-Tetrachloroethane	< 6	6	
1,1,2,2-Tetrachloroethane	< 6	6	
Tetrachloroethene	< 6	6	
Toluene	< 6	6	
1,2,3-Trichlorobenzene	< 6	6	
1,2,4-Trichlorobenzene	< 6	6	
1,1,1-Trichloroethane	< 6	6	
1,1,2-Trichloroethane	< 6	6	
Trichloroethene	< 6	6	
Trichlorofluoromethane	< 6	6	
1,2,3-Trichloropropane	< 6	6	
1,2,4-Trimethylbenzene	< 6	6	
1,3,5-Trimethylbenzene	< 6	6	
Vinyl acetate	< 11	11	
Vinyl chloride	< 2	2	
Xylene, M&P	< 6	6	
Xylene, Ortho	< 6	6	
Xylene, Total	< 11	11	
Dibromofluoromethane (surrogate)	113%		
1,2-Dichloroethane-d4 (surrogate)	119%		
Toluene-d8 (surrogate)	111%		
4-bromofluorobenzene (surrogate)	100%		
Analysis Date/Time:	07-19-09/17:28		
Analyst Initials	tjg		

Percent Solids:

89%

All results reported on dry weight basis.

Page 18 of 49



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8270 SVOC

Prep Method: 3550B

Analytical Batch: 071609B

Client Sample ID: DARK SOIL-SOUTH OF TAR FLOW **Sample Collection Date/Time:** 7/13/09
Envision Sample Number: 9-10004 **Sample Received Date/Time:** 7/15/09 16:28
Sample Matrix: soil

Compounds	Sample Results (mg/kg)	Rep. Limit (mg/kg)	Flags
Acenaphthene	< 0.37	0.37	
Acenaphthylene	< 0.37	0.37	
Aniline	< 0.37	0.37	
Anthracene	< 0.37	0.37	
Benzo(a)anthracene	< 0.37	0.37	
Benzo(a)pyrene	< 0.37	0.37	
Benzo(b)fluoranthene	< 0.37	0.37	
Benzo(g,h,i)perylene	< 0.37	0.37	
Benzo(k)fluoranthene	< 0.37	0.37	
Benzoic Acid	< 1.80	1.80	
Benzyl Alcohol	< 0.74	0.74	
4-Bromophenylphenyl ether	< 0.37	0.37	
Butylbenzylphthalate	< 0.37	0.37	
Carbazole	< 0.74	0.74	
4-Chloro-3-methylphenol	< 0.74	0.74	
4-Chloroaniline	< 0.74	0.74	
bis(2-Chloroethoxy)methane	< 0.37	0.37	
bis(2-Chloroethyl)ether	< 0.37	0.37	
bis(2-Chloroisopropyl)ether	< 0.37	0.37	
2-Choronaphthalene	< 0.37	0.37	
2-Chlorophenol	< 0.37	0.37	
4-Chlorophenylphenyl ether	< 0.37	0.37	
Chrysene	< 0.37	0.37	
Dibenzo(a,h)anthracene	< 0.37	0.37	
Dibenzofuran	< 0.37	0.37	
1,2-Dichlorobenzene	< 0.37	0.37	
1,3-Dichlorobenzene	< 0.37	0.37	
1,4-Dichlorobenzene	< 0.37	0.37	
3,3-Dichlorobenzidine	< 0.74	0.74	
2,4-Dichlorophenol	< 0.37	0.37	
Diethylphthalate	< 0.37	0.37	
2,4-Dimethylphenol	< 0.37	0.37	
Dimethylphthalate	< 0.37	0.37	
Di-n-butylphthalate	< 0.37	0.37	



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Analytical Report

8270 continued...

Compounds	Sample Results (mg/kg)	Rep. Limit (mg/kg)	Flags
4,6-Dinitro-2-methylphenol	< 1.80	1.80	
2,4-Dinitrophenol	< 1.80	1.80	
2,4-Dinitrotoluene	< 0.37	0.37	
2,6-Dinitrotoluene	< 0.37	0.37	
Di-n-octylphthalate	< 0.37	0.37	
bis(2-Ethylhexyl)phthalate	< 0.37	0.37	
Fluoranthene	< 0.37	0.37	
Fluorene	< 0.37	0.37	
Hexachloro-1,3-butadiene	< 0.37	0.37	
Hexachlorobenzene	< 0.37	0.37	
Hexachlorocyclopentadiene	< 0.37	0.37	
Hexachloroethane	< 0.37	0.37	
Indeno(1,2,3-cd)pyrene	< 0.37	0.37	
Isophorone	< 0.37	0.37	
2-Methylnaphthalene	< 0.37	0.37	
2-Methylphenol (o-Cresol)	< 0.37	0.37	
3&4-Methylphenol	< 0.74	0.74	
Naphthalene	< 0.37	0.37	
2-Nitroaniline	< 1.80	1.80	
3-Nitroaniline	< 1.80	1.80	
4-Nitroaniline	< 1.80	1.80	
Nitrobenzene	< 0.37	0.37	
2-Nitrophenol	< 0.37	0.37	
4-Nitrophenol	< 1.80	1.80	
N-Nitroso-di-n-propylamine	< 0.37	0.37	
N-Nitrosodiphenylamine	< 0.37	0.37	
Pentachlorophenol	< 1.80	1.80	
Phenanthrene	< 0.34	0.34	
Phenol	< 0.37	0.37	
Pyrene	< 0.37	0.37	
1,2,4-Trichlorobenzene	< 0.37	0.37	
2,4,5-Trichlorophenol	< 0.37	0.37	
2,4,6-Trichlorophenol	< 0.37	0.37	
2-Fluorophenol (surrogate)	98%		
Phenol-d6 (surrogate)	95%		
Nitrobenzene-d5 (surrogate)	100%		
2-Fluorobiphenyl (surrogate)	73%		
2,4,6-Tribromophenol (surrogate)	41%		
p-Terphenyl-d14 (surrogate)	52%		
Analysis Date/Time:	07-16-09/23:01		
Analyst Initials:	gjd		
Date Extracted:	7/16/2009		
Initial Sample Weight:	30 g		
Final Volume:	1.0 mL		
Percent Solids	89%		

All results reported on dry weight basis.

Page 20 of 49



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

DARK SOIL-SOUTH OF TAR
FLOW

9-10004
soil

Sample Collection Date/Time: 7/13/09
Sample Received Date/Time: 7/15/09 16:28

Analyte	Sample Results	Flags	Method
Percent Moisture	11.0%		1684
Percent Solids	89.0%		1684
Analysis Date:	7/18/09		
Analyst Initials	zrc		



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8260

Prep Method: 5035A

Analytical Batch: 071909VS

SOIL DIRECTLY UNDER TAR

Client Sample ID:	FLOW	Sample Collection Date/Time:	7/13/09 12:45
Envision Sample Number:	9-10005	Sample Received Date/Time:	7/15/09 16:28
Sample Matrix:	soil		

Compounds	Sample Results (ug/kg)	Rep. Limit (ug/kg)	Flags
Acetone	< 106	106	
Acrolein	< 106	106	
Acrylonitrile	< 106	106	
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromoform	< 5	5	
Bromochloromethane	< 5	5	
Bromodichloromethane	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 53	53	
2-Butanone (MEK)	< 11	11	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 53	53	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 5	5	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 5	5	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 106	106	
Dichlorodifluoromethane	< 5	5	
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	



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Analytical Report

8260 continued...

Compounds	Sample Results (ug/kg)	Rep. Limit (ug/kg)	Flags
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
cis-1,3-Dichloropropene	< 5	5	
trans-1,3-Dichloropropene	< 5	5	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 106	106	
Hexachloro-1,3-butadiene	< 5	5	
n-Hexane	< 11	11	
2-Hexanone	< 11	11	
Iodomethane	< 11	11	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 21	21	
4-Methyl-2-pentanone (MIBK)	< 11	11	
Methyl-tert-butyl-ether	< 5	5	
Naphthalene	< 5	5	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 5	5	
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 5	5	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 11	11	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylene, Total	< 11	11	
Dibromofluoromethane (surrogate)	99%		
1,2-Dichloroethane-d4 (surrogate)	105%		
Toluene-d8 (surrogate)	105%		
4-bromofluorobenzene (surrogate)	91%		
Analysis Date/Time:	07-19-09/17:50		
Analyst Initials	tjg		

Percent Solids:

94%

All results reported on dry weight basis.

Page 23 of 49



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

Analytical Method: 8270 SVOC

Prep Method: 3550B

Analytical Batch: 071609B

Client Sample ID: SOIL DIRECTLY UNDER TAR FLOW **Sample Collection Date/Time:** 7/13/09 12:45

Envision Sample Number: 9-10005 **Sample Received Date/Time:** 7/15/09 16:28

Sample Matrix: soil

Compounds	Sample Results (mg/kg)	Rep. Limit (mg/kg)	Flags
Acenaphthene	< 0.35	0.35	
Acenaphthylene	1.39	0.35	
Aniline	< 0.35	0.35	
Anthracene	1.48	0.35	
Benzo(a)anthracene	4.16	0.35	
Benzo(a)pyrene	< 0.35	0.35	
Benzo(b)fluoranthene	< 0.35	0.35	
Benzo(g,h,i)perylene	< 0.35	0.35	
Benzo(k)fluoranthene	< 0.35	0.35	
Benzoic Acid	< 1.70	1.70	
Benzyl Alcohol	< 0.70	0.70	
4-Bromophenylphenyl ether	< 0.35	0.35	
Butylbenzylphthalate	< 0.35	0.35	
Carbazole	< 0.70	0.70	
4-Chloro-3-methylphenol	< 0.70	0.70	
4-Chloroaniline	< 0.70	0.70	
bis(2-Chloroethoxy)methane	< 0.35	0.35	
bis(2-Chloroethyl)ether	< 0.35	0.35	
bis(2-Chloroisopropyl)ether	< 0.35	0.35	
2-Chloronaphthalene	1.20	0.35	
2-Chlorophenol	< 0.35	0.35	
4-Chlorophenylphenyl ether	< 0.35	0.35	
Chrysene	2.85	0.35	
Dibenzo(a,h)anthracene	< 0.35	0.35	
Dibenzofuran	< 0.35	0.35	
1,2-Dichlorobenzene	< 0.35	0.35	
1,3-Dichlorobenzene	< 0.35	0.35	
1,4-Dichlorobenzene	< 0.35	0.35	
3,3-Dichlorobenzidine	< 0.70	0.70	
2,4-Dichlorophenol	< 0.35	0.35	
Diethylphthalate	< 0.35	0.35	
2,4-Dimethylphenol	< 0.35	0.35	
Dimethylphthalate	< 0.35	0.35	
Di-n-butylphthalate	< 0.35	0.35	



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Analytical Report

8270 continued...

Compounds	Sample Results (mg/kg)	Rep. Limit (mg/kg)	Flags
4,6-Dinitro-2-methylphenol	< 1.70	1.70	
2,4-Dinitrophenol	< 1.70	1.70	
2,4-Dinitrotoluene	< 0.35	0.35	
2,6-Dinitrotoluene	< 0.35	0.35	
Di-n-octylphthalate	< 0.35	0.35	
bis(2-Ethylhexyl)phthalate	< 0.35	0.35	
Fluoranthene	12.7	0.35	1
Fluorene	0.72	0.35	
Hexachloro-1,3-butadiene	< 0.35	0.35	
Hexachlorobenzene	< 0.35	0.35	
Hexachlorocyclopentadiene	< 0.35	0.35	
Hexachloroethane	< 0.35	0.35	
Indeno(1,2,3-cd)pyrene	1.27	0.35	
Isophorone	< 0.35	0.35	
2-Methylnaphthalene	< 0.35	0.35	
2-Methylphenol (o-Cresol)	< 0.35	0.35	
3&4-Methylphenol	< 0.70	0.70	
Naphthalene	< 0.35	0.35	
2-Nitroaniline	< 1.70	1.70	
3-Nitroaniline	< 1.70	1.70	
4-Nitroaniline	< 1.70	1.70	
Nitrobenzene	< 0.35	0.35	
2-Nitrophenol	< 0.35	0.35	
4-Nitrophenol	< 1.70	1.70	
N-Nitroso-di-n-propylamine	< 0.35	0.35	
N-Nitrosodiphenylamine	< 0.35	0.35	
Pentachlorophenol	< 1.70	1.70	
Phenanthrene	5.41	0.32	1
Phenol	< 0.35	0.35	
Pyrene	8.17	0.35	1
1,2,4-Trichlorobenzene	< 0.35	0.35	
2,4,5-Trichlorophenol	< 0.35	0.35	
2,4,6-Trichlorophenol	< 0.35	0.35	
2-Fluorophenol (surrogate)	92%		
Phenol-d6 (surrogate)	91%		
Nitrobenzene-d5 (surrogate)	95%		
2-Fluorobiphenyl (surrogate)	72%		
2,4,6-Tribromophenol (surrogate)	40%		
p-Terphenyl-d14 (surrogate)	30%		
Analysis Date/Time:	07-16-09/23:32		
Analyst Initials:	gjd		
Date Extracted:	7/16/2009		
Initial Sample Weight:	30 g		
Final Volume:	1.0 mL		
Percent Solids	94%		

All results reported on dry weight basis.

Page 25 of 49



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Analytical Report

Client Name: KERAMIDA ENVIRONMENTAL

Project ID: CAVU-OPS WABASH

Client Project Manager: SCOTT RANDALL

ENVision Project Number: 2009-1424

SOIL DIRECTLY UNDER TAR

Client Sample ID:	FLOW	Sample Collection Date/Time:	7/13/09 12:45
Envision Sample Number:	9-10005	Sample Received Date/Time:	7/15/09 16:28
Sample Matrix:	soil		

Analyte	Sample Results	Flags	Method
Percent Moisture	6.0%		1684
Percent Solids	94.0%		1684
Analysis Date:	7/18/09		
Analyst Initials	zrc		



**First
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IL ELAP / NELAC Accreditation # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

July 20, 2009

Mr. David Norris
ENVISION LABORATORIES, INC.
1439 Sandler Cir. W. Drive
Indianapolis, IN 46239

Project ID: 2009-1424
First Environmental File ID: 9-2817
Date Received: July 16, 2009

Dear Mr. David Norris:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number 002205: effective 02/06/09 through 02/28/10.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200 or stan@firstenv.com.

Sincerely,

Stan Zaworski
Project Manager



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Case Narrative

ENVISION LABORATORIES, INC.

Project ID: 2009-1424

First Environmental File ID: 9-2817

Date Received: July 16, 2009

Flag	Description	Flag	Description
<	Analyte not detected at or above the reporting limit.	L+	LCS recovery outside control limits; high bias.
B	Analyte detected in associated method blank.	L-	LCS recovery outside control limits; low bias.
C	Identification confirmed by GC/MS.	M	MS recovery outside control limits; LCS acceptable.
D	Surrogates diluted out; recovery not available.	M+	MS recovery outside control limits high bias; LCS acceptable.
E	Estimated result; concentration exceeds calibration range.	M-	MS recovery outside control limits low bias; LCS acceptable.
F	Field measurement.	N	Analyte is not part of our NELAC accreditation.
		ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.
G	Surrogate recovery outside control limits; matrix effect.	P	Chemical preservation pH adjusted in lab.
H	Analysis or extraction holding time exceeded.	Q	The analyte was determined by a GC/MS database search.
J	Estimated result; concentration is less than calib range.	S	Analyte was sub-contracted to another laboratory for analysis.
K	RPD outside control limits.	T	Sample temperature upon receipt exceeded 0-6°C
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	W	Reporting limit elevated due to sample matrix.

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

Sample Batch Comments:

Sample acceptance criteria were met.



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Environmental
Laboratories, Inc.**

IL ELAP / NELAC Accreditation # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • Fax (630) 778-1233

Analytical Report

Client: ENVISION LABORATORIES, INC.

Date Collected: 07/13/09

Project ID: 2009-1424

Time Collected:

Sample ID: Dark soil south of tar flow/9-10004

Date Received: 07/16/09

Sample No: 9-2817-001

Date Reported: 07/20/09

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, total	Method: 2540B			
Analysis Date: 07/16/09				
Total Solids	88.42		%	
Polychlorinated biphenyls (PCBs)	Method: 8082			
Analysis Date: 07/20/09	Preparation Method 3540C Preparation Date: 07/16/09			
Aroclor 1016	< 80.0	80.0	ug/kg	
Aroclor 1221	< 80.0	80.0	ug/kg	
Aroclor 1232	< 80.0	80.0	ug/kg	
Aroclor 1242	< 80.0	80.0	ug/kg	
Aroclor 1248	< 80.0	80.0	ug/kg	
Aroclor 1254	< 160	160	ug/kg	
Aroclor 1260	< 160	160	ug/kg	
Tetrachloro-m-xylene (Surr)	91	53-139	%	
Decachlorobiphenyl (Surr)	93	21-139	%	



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Analytical Report

Client: ENVISION LABORATORIES, INC.
Project ID: 2009-1424
Sample ID: Soil directly under tar flow/9-10005
Sample No: 9-2817-002

Date Collected: 07/13/09
Time Collected: 12:45
Date Received: 07/16/09
Date Reported: 07/20/09

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, total				
	Method: 2540B			
Analysis Date:	07/16/09			
Total Solids	93.69		%	
Polychlorinated biphenyls (PCBs)				
	Method: 8082			
Analysis Date:	07/20/09			
Aroclor 1016	< 80.0	80.0	ug/kg	
Aroclor 1221	< 80.0	80.0	ug/kg	
Aroclor 1232	< 80.0	80.0	ug/kg	
Aroclor 1242	< 80.0	80.0	ug/kg	
Aroclor 1248	< 80.0	80.0	ug/kg	
Aroclor 1254	< 160	160	ug/kg	
Aroclor 1260	< 160	160	ug/kg	
Tetrachloro-m-xylene (Surr)	91	53-139	%	
Decachlorobiphenyl (Surr)	111	21-139	%	



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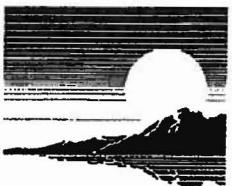
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Analytical Report

Client: ENVISION LABORATORIES, INC.
Project ID: 2009-1424
Sample ID: Upstream # 1/9-10000
Sample No: 9-2817-003

Date Collected: 07/13/09
Time Collected: 11:45
Date Received: 07/16/09
Date Reported: 07/20/09

Analyte	Result	R.L.	Units	Flags
Polychlorinated biphenyls (PCBs) Analysis Date: 07/20/09	Method: 8082		Preparation Method 3510C Preparation Date: 07/17/09	
Aroclor 1016	< 0.50	0.50	ug/L	
Aroclor 1221	< 0.50	0.50	ug/L	
Aroclor 1232	< 0.50	0.50	ug/L	
Aroclor 1242	< 0.50	0.50	ug/L	
Aroclor 1248	< 0.50	0.50	ug/L	
Aroclor 1254	< 0.50	0.50	ug/L	
Aroclor 1260	< 0.50	0.50	ug/L	
Tetrachloro-m-xylene (Surr)	69	59-125	%	
Decachlorobiphenyl (Surr)	86	16-134	%	



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Analytical Report

Client: ENVISION LABORATORIES, INC.
Project ID: 2009-1424
Sample ID: Upstream # 2/9-10001
Sample No: 9-2817-004

Date Collected: 07/13/09
Time Collected:
Date Received: 07/16/09
Date Reported: 07/20/09

Analyte	Result	R.L.	Units	Flags
Polychlorinated biphenyls (PCBs) Analysis Date: 07/20/09	Method: 8082		Preparation Method 3510C	
Aroclor 1016	< 0.50	0.50	ug/L	
Aroclor 1221	< 0.50	0.50	ug/L	
Aroclor 1232	< 0.50	0.50	ug/L	
Aroclor 1242	< 0.50	0.50	ug/L	
Aroclor 1248	< 0.50	0.50	ug/L	
Aroclor 1254	< 0.50	0.50	ug/L	
Aroclor 1260	< 0.50	0.50	ug/L	
Tetrachloro-m-xylene (Surr)	80	59-125	%	
Decachlorobiphenyl (Surr)	96	16-134	%	



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Analytical Report

Client: ENVISION LABORATORIES, INC.
Project ID: 2009-1424
Sample ID: Downstream/9-10002
Sample No: 9-2817-005

Date Collected: 07/13/09
Time Collected:
Date Received: 07/16/09
Date Reported: 07/20/09

Analyte	Method:	Result	R.L.	Units	Flags
Polychlorinated biphenyls (PCBs)	8082				
Analysis Date:	07/20/09				
Aroclor 1016		< 0.50	0.50	ug/L	
Aroclor 1221		< 0.50	0.50	ug/L	
Aroclor 1232		< 0.50	0.50	ug/L	
Aroclor 1242		< 0.50	0.50	ug/L	
Aroclor 1248		< 0.50	0.50	ug/L	
Aroclor 1254		< 0.50	0.50	ug/L	
Aroclor 1260		< 0.50	0.50	ug/L	
Tetrachloro-m-xylene (Surr)		75	59-125	%	
Decachlorobiphenyl (Surr)		95	16-134	%	



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8260 Quality Control Data

ENVision Batch Number: 071909VS

Method Blank (MB):	MB Results (ug/kg)	Rep Lim (ug/kg)	Flag
Acetone	< 100	100	
Acrolein	< 100	100	
Acrylonitrile	< 100	100	
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 5	5	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 5	5	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 100	100	
Dichlorodifluoromethane	< 5	5	
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
cis-1,3-Dichloropropene	< 5	5	
trans-1,3-Dichloropropene	< 5	5	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	

8260 QC Continued...

Page 34 of 49



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	<u>MB Results (ug/kg)</u>	<u>Rep Lim (ug/kg)</u>	<u>Flag</u>
Hexachloro-1,3-butadiene	< 5	5	
2-Hexanone	< 10	10	
n-Hexane	< 10	10	
Iodomethane	< 10	10	
Isopropylbenzene (Cumene)	< 5	5	
p-Isopropyltoluene	< 5	5	
Methylene chloride	< 5	5	
4-Methyl-2-pentanone (MIBK)	< 10	10	
Methyl-tert-butyl-ether	< 5	5	
Naphthalene	< 5	5	
n-Propylbenzene	< 5	5	
Styrene	< 5	5	
1,1,1,2-Tetrachloroethane	< 5	5	
1,1,2,2-Tetrachloroethane	< 5	5	
Tetrachloroethene	< 5	5	
Toluene	< 5	5	
1,2,3-Trichlorobenzene	< 5	5	
1,2,4-Trichlorobenzene	< 5	5	
1,1,1-Trichloroethane	< 5	5	
1,1,2-Trichloroethane	< 5	5	
Trichloroethene	< 5	5	
Trichlorofluoromethane	< 5	5	
1,2,3-Trichloropropane	< 5	5	
1,2,4-Trimethylbenzene	< 5	5	
1,3,5-Trimethylbenzene	< 5	5	
Vinyl acetate	< 10	10	
Vinyl chloride	< 2	2	
Xylene, M&P	< 5	5	
Xylene, Ortho	< 5	5	
Xylenes, Total	<10	10	
Dibromofluoromethane (surrogate)	114%		
1,2-Dichloroethane-d4 (surrogate)	117%		
Toluene-d8 (surrogate)	104%		
4-bromofluorobenzene (surrogate)	86%		
Analysis Date/Time:	07-19-09/17:06		
Analyst Initials	tig		



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8260 QC Continued...

<u>Laboratory Control Standard (LCS):</u>	<u>LCS Results (ug/kg)</u>	<u>LCS Conc(ug/kg)</u>	<u>% Rec</u>	<u>Flag</u>
Vinyl Chloride	49.3	50	99%	
1,1-Dichloroethene	53.9	50	108%	
trans-1,2-Dichloroethene	51.5	50	103%	
Methyl-tert-butyl ether	41.1	50	82%	
1,1-dichloroethane	48.1	50	96%	
cis-1,2-Dichloroethene	51.1	50	102%	
Chloroform	53.2	50	106%	
1,1,1-Trichloroethane	55.4	50	111%	
Benzene	54.4	50	109%	
Trichloroethene	55.3	50	111%	
Toluene	57.8	50	116%	
1,1,1,2-Tetrachloroethane	53.6	50	107%	
Chlorobenzene	53.8	50	108%	
Ethylbenzene	46.1	50	92%	
O-Xylene	53.3	50	107%	
N-propylbenzene	48.8	50	98%	
Dibromofluoromethane (surrogate)	110%			
1,2-Dichloroethane-d4 (surrogate)	121%			
Toluene-d8 (surrogate)	126%			
4-bromofluorobenzene (surrogate)	121%			
Analysis Date/Time:	07-19-09 16:22			
Analyst Initials	tjg			



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8270 Quality Control Data

ENVision Batch Number: 071609B

Method Blank (MB):	Method Blank Results (mg/kg)	Reporting Limit (mg/kg)	Flag
Acenaphthene	< 0.33	0.33	
Acenaphthylene	< 0.33	0.33	
Aniline	< 0.33	0.33	
Anthracene	< 0.33	0.33	
Benzo(a)anthracene	< 0.33	0.33	
Benzo(a)pyrene	< 0.33	0.33	
Benzo(b)fluoranthene	< 0.33	0.33	
Benzo(g,h,i)perylene	< 0.33	0.33	
Benzo(k)fluoranthene	< 0.33	0.33	
Benzoic Acid	< 1.6	1.6	
Benzyl Alcohol	< 0.66	0.66	
4-Bromophenylphenyl ether	< 0.33	0.33	
Butylbenzylphthalate	< 0.33	0.33	
Carbazole	< 0.66	0.66	
4-Chloro-3-methylphenol	< 0.66	0.66	
4-Chloroaniline	< 0.66	0.66	
bis(2-Chloroethoxy)methane	< 0.33	0.33	
bis(2-Chloroethyl)ether	< 0.33	0.33	
bis(2-Chloroisopropyl)ether	< 0.33	0.33	
2-Choronaphthalene	< 0.33	0.33	
2-Chlorophenol	< 0.33	0.33	
4-Chlorophenylphenyl ether	< 0.33	0.33	
Chrysene	< 0.33	0.33	
Dibenzo(a,h)anthracene	< 0.33	0.33	
Dibenzofuran	< 0.33	0.33	
1,2-Dichlorobenzene	< 0.33	0.33	
1,3-Dichlorobenzene	< 0.33	0.33	
1,4-Dichlorobenzene	< 0.33	0.33	
3,3-Dichlorobenzidine	< 0.66	0.66	
2,4-Dichlorophenol	< 0.33	0.33	
Diethylphthalate	< 0.33	0.33	
2,4-Dimethylphenol	< 0.33	0.33	
Dimethylphthalate	< 0.33	0.33	
Di-n-butylphthalate	< 0.33	0.33	
4,6-Dinitro-2-methylphenol	< 1.6	1.6	
2,4-Dinitrophenol	< 1.6	1.6	
2,4-Dinitrotoluene	< 0.33	0.33	
2,6-Dinitrotoluene	< 0.33	0.33	
Di-n-octylphthalate	< 0.33	0.33	
bis(2-Ethylhexyl)phthalate	< 0.33	0.33	
Fluoranthene	< 0.33	0.33	
Fluorene	< 0.33	0.33	
Hexachloro-1,3-butadiene	< 0.33	0.33	
Hexachlorobenzene	< 0.33	0.33	



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8270 QC continued...

	Method Blank Results (mg/kg)	Reporting Limit (mg/kg)	Flag
Hexachlorocyclopentadiene	< 0.33	0.33	
Hexachloroethane	< 0.33	0.33	
Indeno(1,2,3-cd)pyrene	< 0.33	0.33	
Isophorone	< 0.33	0.33	
2-Methylnaphthalene	< 0.33	0.33	
2-Methylphenol (o-Cresol)	< 0.33	0.33	
3&4-Methylphenol	< 0.66	0.66	
Naphthalene	< 0.33	0.33	
2-Nitroaniline	< 1.6	1.6	
3-Nitroaniline	< 1.6	1.6	
4-Nitroaniline	< 1.6	1.6	
Nitrobenzene	< 0.33	0.33	
2-Nitrophenol	< 0.33	0.33	
4-Nitrophenol	< 1.6	1.6	
N-Nitroso-di-n-propylamine	< 0.33	0.33	
N-Nitrosodiphenylamine	< 0.33	0.33	
Pentachlorophenol	< 1.6	1.6	
Phenanthrene	< 0.3	0.3	
Phenol	< 0.33	0.33	
Pyrene	< 0.33	0.33	
1,2,4-Trichlorobenzene	< 0.33	0.33	
2,4,5-Trichlorophenol	< 0.33	0.33	
2,4,6-Trichlorophenol	< 0.33	0.33	
2-Fluorophenol (surrogate)	78%		
Phenol-d6 (surrogate)	62%		
Nitrobenzene-d5 (surrogate)	72%		
2-Fluorobiphenyl (surrogate)	57%		
2,4,6-Tribromophenol (surrogate)	47%		
p-Terphenyl-d14 (surrogate)	86%		

Analysis Date/Time: 07-16-09/21:28

Analyst Initials: gjd

Date Extracted: 7/16/2009

Initial Sample Weight: 30 g

Final Volume: 1.0 mL

LCS/LCSD	LCS Results	LCS Concentration	LCSD Results	LCS Recovery	LCSD Recovery	RPD	Flag
Acenaphthene	44.63	50.00	43.13	89.3%	86.3%	3.3%	
4-Chloro-3-methylphenol	48.33	50.00	49.04	96.7%	98.1%	1.4%	
2-Chlorophenol	51.51	50.00	50.52	103.0%	101.0%	2.0%	
1,4-Dichlorobenzene	40.72	50.00	37.77	81.4%	75.5%	6.9%	
4,6-Dinitro-2-methylphenol	50.09	50.00	48.25	100.2%	96.5%	3.7%	
2,4-Dinitrophenol	38.77	50.00	43.17	77.5%	86.3%	10.0%	
2,4-Dinitrotoluene	37.66	50.00	38.61	75.3%	77.2%	2.3%	
2-Nitroaniline	48.05	50.00	47.84	96.1%	95.7%	0.4%	
3-Nitroaniline	43.45	50.00	42.90	86.9%	85.8%	1.2%	
4-Nitroaniline	46.71	50.00	46.12	93.4%	92.2%	1.2%	
4-Nitrophenol	40.50	100.00	41.68	40.5%	41.7%	Page 38 of 49	



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8270 QC continued...

N-Nitroso-di-n-propylamine	52.10	50.00	52.46	104.2%	104.9%	0.7%
Pentachlorophenol	45.95	50.00	45.67	91.9%	91.3%	0.6%
Phenol	51.73	50.00	51.09	103.5%	102.2%	1.3%
Pyrene	53.80	50.00	51.59	107.6%	103.2%	4.3%
1,2,4-Trichlorobenzene	24.03	50.00	23.13	48.1%	46.3%	2.8%
2,4,5-Trichlorophenol	26.92	50.00	26.57	53.8%	53.1%	1.0%
2-Fluorophenol (surrogate)	99%		110%			
Phenol-d6 (surrogate)	99%		91%			
Nitrobenzene-d5 (surrogate)	127%		118%			
2-Fluorobiphenyl (surrogate)	80%		78%			
2,4,6-Tribromophenol (surrogate)	43%		41%			
p-Terphenyl-d14 (surrogate)	47%		44%			
Analysis Date/Time:	07-16-09/21:59		07-16-09/21:59			
Analyst Initials:	gjd		gjd			
Date Extracted:	7/16/2009		7/16/2009			
Initial Sample Weight:	30 g		30 g			
Final Volume:	1.0 mL		1.0 mL			



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6010B/7470A TCLP Metals Quality Control Data

ENVision Batch Number: 072409icp / 072209hgw

<u>Method Blank (MB):</u>	<u>MB Results (mg/L)</u>	<u>Rep Lim (mg/L)</u>	<u>Flag</u>
Arsenic	< 0.01	0.01	
Barium	< 0.1	0.1	
Cadmium	< 0.005	0.005	
Chromium	< 0.01	0.01	
Lead	< 0.01	0.01	
Mercury	< 0.002	0.002	
Selenium	< 0.01	0.01	
Silver	< 0.05	0.05	

Analysis Date/Time: 07-24-09/08:11icp / 07-22-09/11:23hg

Analyst Initials: gjd

<u>Laboratory Control Standard (LCS):</u>	<u>LCS Results(mg/L)</u>	<u>LCS Conc(mg/L)</u>	<u>% Rec</u>	<u>Flag</u>
Arsenic	0.50	0.50	100	
Barium	0.51	0.50	102	
Cadmium	0.50	0.50	100	
Chromium	0.51	0.50	102	
Lead	0.50	0.50	100	
Mercury	0.0026	0.0025	104	
Selenium	0.50	0.50	100	
Silver	0.52	0.50	104	

Analysis Date/Time: 07-24-09/08:42icp / 07-22-09/11:27hg

Analyst Initials: gjd



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TCLP VOC Quality Control Data

ENVision Batch Number: 072209TCLP

<u>Method Blank (MB):</u>	<u>MB Results (ug/L)</u>	<u>Rep Lim (ug/L)</u>	<u>Flag</u>
Benzene	< 0.050	0.05	
Methyl ethyl ketone (MEK)	< 0.100	0.1	
Carbon Tetrachloride	< 0.050	0.05	
Chlorobenzene	< 0.050	0.05	
Chloroform	< 0.050	0.05	
1,2-Dichloroethane	< 0.050	0.05	
1,1-Dichloroethene	< 0.050	0.05	
Tetrachloroethene	< 0.050	0.05	
Trichloroethene	< 0.050	0.05	
Vinyl Chloride	< 0.100	0.1	
Dibromofluoromethane (surrogate)	102%		
1,2-Dichloroethane-d4 (surrogate)	82%		
Toluene-d8 (surrogate)	108%		
4-bromofluorobenzene (surrogate)	98%		
Analysis Date/Time:	07/22/09/06:28		
Analyst Initials	tjg		

<u>Laboratory Control Standard (LCS):</u>	<u>LCS Results (ug/L)</u>	<u>LCS Conc (ug/L)</u>	<u>% Rec</u>	<u>Flag</u>
Benzene	58.1	50	116%	
Methyl ethyl ketone (MEK)	117	125	94%	
Carbon Tetrachloride	40.5	50	81%	
Chlorobenzene	48.1	50	96%	
Chloroform	47.6	50	95%	
1,2-Dichloroethane	41.2	50	82%	
1,1-Dichloroethene	49.1	50	98%	
Tetrachloroethene	40.1	50	80%	
Trichloroethene	50.2	50	100%	
Vinyl Chloride	59.0	50	118%	
Dibromofluoromethane (surrogate)	93%			
1,2-Dichloroethane-d4 (surrogate)	94%			
Toluene-d8 (surrogate)	107%			
4-bromofluorobenzene (surrogate)	109%			
Analysis Date/Time:	07/22/09/05:42			
Analyst Initials				



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Matrix Spike/Matrix Spike DUP:	Sample Results (ug/L)	MS Res (ug/L)	MSD Res (ug/L)	Spike				
				Conc. ug/L	MS Rec	MSD Rec	% D	FLAG
Benzene	0	57.4	57.9	50	115%	116%	0.87	
Methyl ethyl ketone (MEK)	0	126	143	125	101%	114%	12.6	
Carbon Tetrachloride	0	43.4	40.9	50	87%	82%	5.93	
Chlorobenzene	0	45.1	46.5	50	90%	93%	3.06	
Chloroform	0	46.5	47.7	50	93%	95%	2.55	
1,2-Dichloroethane	0	38.4	51.6	50	77%	103%	29.3	2
1,1-Dichloroethene	0	49.1	49.5	50	98%	99%	0.81	
Tetrachloroethene	0	37.8	35.7	50	76%	71%	5.71	
Trichloroethene	0	51.7	49.1	50	103%	98%	5.16	
Vinyl Chloride	0	60.2	62.4	50	120%	125%	3.59	
Dibromofluoromethane (surrogate)	104%	102%	96%					
1,2-Dichloroethane-d4 (surrogate)	86%	97%	89%					
Toluene-d8 (surrogate)	104%	111%	108%					
4-bromofluorobenzene (surrogate)	98%	100%	105%					
Analysis Date/Time:	07/22/09/09:56		07/22/09/10:19		07/22/09/10:42			
Analyst Initials	tjg		tjg		tjg			
Spiked sample number:	9-10003							



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8260 Quality Control Data

ENVision Batch Number: 071809VW

<u>Method Blank (MB):</u>	<u>MB Results (ug/L)</u>	<u>Rep Lim (ug/L)</u>	<u>Flag</u>
Acetone	< 100	100	
Acrolein	< 100	100	
Acrylonitrile	< 100	100	
Benzene	< 5	5	
Bromobenzene	< 5	5	
Bromoform	< 5	5	
Bromomethane	< 5	5	
n-Butanol	< 50	50	
2-Butanone (MEK)	< 10	10	
n-Butylbenzene	< 5	5	
sec-Butylbenzene	< 5	5	
tert-Butylbenzene	< 5	5	
Carbon Disulfide	< 5	5	
Carbon Tetrachloride	< 5	5	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
2-Chloroethylvinylether	< 50	50	
Chloroform	< 5	5	
Chloromethane	< 5	5	
2-Chlorotoluene	< 5	5	
4-Chlorotoluene	< 5	5	
1,2-Dibromo-3-chloropropane	< 5	5	
Dibromochloromethane	< 5	5	
1,2-Dibromoethane (EDB)	< 5	5	
Dibromomethane	< 5	5	
1,2-Dichlorobenzene	< 5	5	
1,3-Dichlorobenzene	< 5	5	
1,4-Dichlorobenzene	< 5	5	
trans-1,4-Dichloro-2-butene	< 100	100	
Dichlorodifluoromethane	< 5	5	
1,1-Dichloroethane	< 5	5	
1,2-Dichloroethane	< 5	5	
1,1-Dichloroethene	< 5	5	
cis-1,2-Dichloroethene	< 5	5	
trans-1,2-Dichloroethene	< 5	5	
1,2-Dichloropropane	< 5	5	
1,3-Dichloropropane	< 5	5	
2,2-Dichloropropane	< 5	5	
1,1-Dichloropropene	< 5	5	
cis-1,3-Dichloropropene	< 5	5	
trans-1,3-Dichloropropene	< 5	5	
Ethylbenzene	< 5	5	
Ethyl methacrylate	< 100	100	



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8260 QC Continued...

Method Blank (MB):	MB Results (ug/L)	Rep Lim (ug/L)
Hexachloro-1,3-butadiene	< 5	5
2-Hexanone	< 10	10
n-Hexane	< 10	10
Iodomethane	< 10	10
Isopropylbenzene (Cumene)	< 5	5
p-Isopropyltoluene	< 5	5
Methylene chloride	< 5	5
4-Methyl-2-pentanone (MIBK)	< 10	10
Methyl-tert-butyl-ether	< 5	5
Naphthalene	< 5	5
n-Propylbenzene	< 5	5
Styrene	< 5	5
1,1,1,2-Tetrachloroethane	< 5	5
1,1,2,2-Tetrachloroethane	< 5	5
Tetrachloroethene	< 5	5
Toluene	< 5	5
1,2,3-Trichlorobenzene	< 5	5
1,2,4-Trichlorobenzene	< 5	5
1,1,1-Trichloroethane	< 5	5
1,1,2-Trichloroethane	< 5	5
Trichloroethene	< 5	5
Trichlorofluoromethane	< 5	5
1,2,3-Trichloropropane	< 5	5
1,2,4-Trimethylbenzene	< 5	5
1,3,5-Trimethylbenzene	< 5	5
Vinyl acetate	< 10	10
Vinyl chloride	< 2	2
Xylene, M&P	< 5	5
Xylene, Ortho	< 5	5
Xylene (total)	< 10	10
Dibromofluoromethane (surrogate)	%	
1,2-Dichloroethane-d4 (surrogate)	%	
Toluene-d8 (surrogate)	%	
4-bromofluorobenzene (surrogate)	%	
Analysis Date/Time:		
Analyst Initials	tjg	



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8260 QC Continued...

<u>LCS/LCSD</u>	<u>LCS Results (ug/l)</u>	<u>LCS/LCSD Conc. (ug/l)</u>	<u>LCSD Result (ug/l)</u>	<u>LCS Rec.</u>	<u>LCSD Rec.</u>	<u>RPD</u>	<u>Flag</u>
Vinyl Chloride	55.9	50	57.4	112%	115%	2.6%	
1,1-Dichloroethene	45.4	50	50.4	91%	101%	10.4%	
trans-1,2-Dichloroethene	47.9	50	50.6	96%	101%	5.5%	
Methyl-tert-butyl-ether	45.9	50	47.5	92%	95%	3.4%	
1,1-Dichloroethane	53.3	50	50.8	107%	102%	4.8%	
cis-1,2-Dichloroethene	50.4	50	48.8	101%	98%	3.2%	
Chloroform	49.2	50	49.6	98%	99%	0.8%	
1,1,1-Trichloroethane	42.7	50	42.6	85%	85%	0.2%	
Carbon Tetrachloride	44.3	50	43.4	89%	87%	2.1%	
Benzene	58.6	50	57.2	117%	114%	2.4%	
Trichloroethene	53.6	50	58.6	107%	117%	8.9%	
Toluene	55.7	50	55.3	111%	111%	0.7%	
1,1,1,2-Tetracholorethane	45.5	50	47.9	91%	96%	5.1%	
Chlorobenzene	49.5	50	52.1	99%	104%	5.1%	
Ethylbenzene	48.1	50	52.4	96%	105%	8.6%	
o-Xylene	54.5	50	53.5	109%	107%	1.9%	
N-propylbenzene	52.7	50	54.8	105%	110%	3.9%	
Dibromofluoromethane (surrogate)	90%		88%				
1,2-Dichloroethane-d4 (surrogate)	90%		80%				
Toluene-d8 (surrogate)	104%		98%				
4-bromofluorobenzene (surrogate)	108%		96%				
Analysis Date/Time:	07-17-09/17:53		07-17-09/18:16				
Analyst Initials	tjg		tjg				



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8270 Quality Control Data

ENVision Batch Number: 071609CW

BNA Method Blank (MB):	Method Blank Results (ug/L)	Reporting Limit (ug/L)	Flag
Aniline	< 10	10	
Benzoic Acid	< 50	50	
Benzyl Alcohol	< 20	20	
4-Bromophenylphenyl ether	< 10	10	
Butylbenzylphthalate	< 10	10	
Carbazole	< 20	20	
4-Chloro-3-methylphenol	< 20	20	
4-Chloroaniline	< 20	20	
bis(2-Chloroethoxy)methane	< 10	10	
bis(2-Chloroethyl)ether	< 10	10	
bis(2-Chloroisopropyl)ether	< 10	10	
2-Chloronaphthalene	< 10	10	
2-Chlorophenol	< 10	10	
4-Chlorophenylphenyl ether	< 10	10	
Dibenzofuran	< 10	10	
1,2-Dichlorobenzene	< 10	10	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 10	10	
3,3-Dichlorobenzidine	< 20	20	
2,4-Dichlorophenol	< 10	10	
Diethylphthalate	< 10	10	
2,4-Dimethylphenol	< 20	20	
Dimethylphthalate	< 10	10	
Di-n-butylphthalate	< 10	10	
4,6-Dinitro-2-methylphenol	< 50	50	
2,4-Dinitrophenol	< 50	50	
2,4-Dinitrotoluene	< 10	10	
2,6-Dinitrotoluene	< 10	10	
Di-n-octylphthalate	< 10	10	
bis(2-Ethylhexyl)phthalate	< 5	5	
Hexachloro-1,3-butadiene	< 10	10	
Hexachlorobenzene	< 5	5	
Hexachlorocyclopentadiene	< 25	25	
Hexachloroethane	< 10	10	
Isophorone	< 10	10	
2-Methylphenol (o-Cresol)	< 10	10	
3&4-Methylphenol	< 20	20	
2-Nitroaniline	< 50	50	
3-Nitroaniline	< 50	50	
4-Nitroaniline	< 50	50	
Nitrobenzene	< 10	10	
2-Nitrophenol	< 10	10	
4-Nitrophenol	< 50	50	
N-Nitroso-di-n-propylamine	< 10	10	
N-Nitrosodiphenylamine	< 10	10	



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8270 QC Continued...

	Method Blank Results (ug/L)	Reporting Limit (ug/L)	Flag
Pentachlorophenol	< 50	50	
Phenol	< 10	10	
1,2,4-Trichlorobenzene	< 10	10	
2,4,5-Trichlorophenol	< 10	10	
2,4,6-Trichlorophenol	< 10	10	
2-Fluorophenol (surrogate)	84%		
Phenol-d6 (surrogate)	97%		
Nitrobenzene-d5 (surrogate)	110%		
2-Fluorobiphenyl (surrogate)	69%		
2,4,6-Tribromophenol (surrogate)	36%		
p-Terphenyl-d14 (surrogate)	37%		
Analysis Date/Time:	07-20-09/11:03		
Analyst Initials:	gjd		
Date Extracted:	7/16/2009		
Initial Sample Volume:	1000 mL		
Final Volume:	1.0 mL		

PAH-SIM Method Blank (MB):	Method Blank Result (ug/L)	Reporting Limit (ug/L)	Flag
Acenaphthene	< 1.0	1.0	
Acenaphthylene	< 1.0	1.0	
Anthracene	< 0.10	0.10	
Benzo(a)anthracene	< 0.10	0.10	
Benzo(a)pyrene	< 0.10	0.10	
Benzo(b)fluoranthene	< 0.10	0.10	
Benzo(g,h,i)perylene	< 0.10	0.10	
Benzo(k)fluoranthene	< 0.10	0.10	
Chrysene	< 0.10	0.10	
Dibenzo(a,h)anthracene	< 0.10	0.10	
Fluoranthene	< 1.0	1.0	
Fluorene	< 1.0	1.0	
Indeno(1,2,3-cd)pyrene	< 0.022	0.022	
2-methylnaphthalene	< 1.0	1.0	
Naphthalene	< 1.0	1.0	
Phenanthrene	< 1.0	1.0	
Pyrene	< 1.0	1.0	
Analysis Date/Time:	07-20-09/09:29		
Analyst Initials	gjd		



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8270 QC continued...

LCS/LCSD	LCS Results	LCS Conc.	LCSD Results	LCS Recovery	LCSD Recovery	RPD	Flag
Acenaphthene	30.72	50.00	29.21	61.4%	58.4%	4.1%	
4-Chloro-3-methylphenol	34.68	50.00	33.63	69.4%	67.3%	2.7%	
2-Chlorophenol	17.45	50.00	20.22	34.9%	40.4%	9.5%	
1,4-Dichlorobenzene	13.03	50.00	14.17	26.1%	28.3%	4.4%	
4,6-Dinitro-2-methylphenol	42.89	50.00	39.17	85.8%	78.3%	8.5%	
2,4-Dinitrophenol	46.33	50.00	47.15	92.7%	94.3%	1.7%	
2,4-Dinitrotoluene	30.05	50.00	29.48	60.1%	59.0%	1.6%	
2-Nitroaniline	43.67	50.00	43.12	87.3%	86.2%	1.2%	
3-Nitroaniline	25.73	50.00	26.54	51.5%	53.1%	2.4%	
4-Nitroaniline	27.66	50.00	26.78	55.3%	53.6%	2.5%	
4-Nitrophenol	31.26	100.00	30.95	31.3%	31.0%	0.6%	
N-Nitroso-di-n-propylamine	39.23	50.00	39.86	78.5%	79.7%	1.5%	
Pentachlorophenol	30.68	50.00	31.57	61.4%	63.1%	2.4%	
Phenol	27.06	50.00	31.43	54.1%	62.9%	12.1%	
Pyrene	45.10	50.00	45.94	90.2%	91.9%	1.8%	
1,2,4-Trichlorobenzene	10.40	50.00	11.35	20.8%	22.7%	4.0%	
2,4,5-Trichlorophenol	16.88	50.00	17.67	33.8%	35.3%	2.8%	
2-Fluorophenol (surrogate)	34%		63%				
Phenol-d6 (surrogate)	56%		87%				
Nitrobenzene-d5 (surrogate)	69%		108%				
2-Fluorobiphenyl (surrogate)	53%		60%				
2,4,6-Tribromophenol (surrogate)	30%		34%				
p-Terphenyl-d14 (surrogate)	50%		54%				
Analysis Date/Time:	07-20-09/11:33		07-20-09/12:04				
Analyst Initials:	gjd		gjd				
Date Extracted:	7/16/2009		7/16/2009				
Initial Sample Volume:	1000 mL		1000 mL				
Final Volume:	1.0 mL		1.0 mL				



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<u>Flag Number</u>	<u>Comments</u>
1	Reported value is estimated due to linear range exceedence. GJD 07-16-09
2	RPD is biased high but recoveries are within control.



KERAMIDA

401 North College Avenue
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(317) 685-6600 - FAX (317) 685-6610

CHAIN OF CUSTODY RECORD

COC# 5756

2009-1424

Project No.	Project Name	Analyses										MATRIX	QA/QC Level	Detection Level	Comments					
		HCl	NaOH	HNO ₃	H ₂ SO ₄	Unpreserved	Other	VDCS-8260	VDCS-8270	PCBS	TCLP VDCS					TCLP SVDCS	TCLP RCRA M01			
32688	Cavu-Ops Wabash																			
Client	Samplers: (signature)	<i>Scott Randall</i>																		
Cavu-Ops																				
Sampled By:	KERAMIDA Environmental, Inc.											# and Type of Containers								
Sample ID/Description	Date	Time	Comp	Grab	HCl	NaOH	HNO ₃	H ₂ SO ₄	Unpreserved	Other	VDCS-8260	VDCS-8270	PCBS	TCLP VDCS	TCLP SVDCS	TCLP RCRA M01				
Upstream #1 Fairbanks Park	7/13/09	11:45	X	4	*	1					X X X						SW	9-	10000	T.A.T. - ASAP
Upstream #2 Near Impacts	7/13/09		X	4		1					X X X						SW		10001	
Downstream	7/13/09		X	4		1					X X X						SW		10002	
Tar / Soil Mix	7/13/09	12:45	X				4					X X X					Soil		10003	
Dark Soil - South of Tar Pit	7/13/09		X				1				X X X						Soil		10004	
Soil Directly Under Tar Pit	7/13/09	12:45pm	X				1				X X X						Soil		10005	
↓																				
See Cheryl Crom																				
* Split 1-liter amber for PCB & VOC per Scott Randall - CAC 7/15/09																				
Relinquished by: Sign/Date/Time	7/15/09	Received by: Sign/Date/Time	7/15/09	Relinquished by: Sign/Date/Time	7/15/09	Received for Lab: Sign/Date/Time	7/15/09													
<i>Scott Randall</i>	3:54pm	<i>Cheryl Crom</i>	1554	<i>Cheryl Crom</i>	1628	<i>Cheryl Crom</i>	16:28													
Relinquished by: Sign/Date/Time		Received by: Sign/Date/Time		Relinquished by: Sign/Date/Time		Received for Lab: Sign/Date/Time														
Remarks:	1) No method substitution will be performed by the laboratory without KERAMIDA's authorization 2) Please notify KERAMIDA immediately upon receipt, if sample integrity is in question 3) If analysis cannot be conducted within required holding times, please notify KERAMIDA immediately 4) If requested detection limits cannot be achieved, please contact KERAMIDA immediately										Sample Condition: Bottle Intact? Yes/No Field Filtered? Yes/No COC Seals Present & Intact? Yes/No VOC Free of Headspace? Yes/No VOC Preserved? Yes/No Temperature upon Receipt:									